REMARKS/ARGUMENTS

The amendment to Claims 22 and 26 is supported throughout the specification, which describes the invention stucco silica layer. Note also, e.g., Examples 1, 4 and 5 which prepare a stucco layer by heating at 800°C.

New Claims 30 and 31 describe the invention mold "in use," that is, containing the silicon ingot. Support for these claims is found in, e.g., Example 5 wherein molten silicon is poured into the mold and cooled to produce a polycrystalline silicon ingot. Accordingly, no new matter has been entered.

Applicants acknowledge with appreciation the discussion held with Examiner Mackey on July 9, 2003. This discussion served to materially advance the prosecution of this case. Summarized below is the substance of the interview.

As noted by the above amendment to the claims, the present continuation application is directed to molds coated with a stucco silica layer. This stucco layer is different and distinct from the mold layers of the applied prior art, and this distinction has been more particularly pointed out by the above amendment to the claims which recites both the presence of the stucco layer and its preparation at 800°C or less. As will become more clear below, the presently claimed stucco layer has a distinct molecular architecture as compared with the prior art.

Attached hereto is a summary describing silica stability and, in particular, the transformation of silica. This attachment describes the various forms of silica, and the temperatures at which the forms change. As noted in the attachment, the different forms of silica, which occur at different heating temperatures, have different crystal systems, different specific gravities, etc. Importantly, the presently claimed stucco layer is one prepared by heating at not more than 800°C (note the silica stability chart, attached).

On the other hand, Daxer uses a mold with a liner of quartz sand that is sintered at between 1300° and 1600°C. As noted in the attached stability chart, this high temperature provides silica which is different and distinct as compared with the presently claimed stucco layer heated to not more than 800°C.

The situation with EP '543 is essentially the same. That is, the layer described in the reference that is pertinent here is described as being prepared by "melting" (Abstract) and being "molten" (page 5, bottom). This significant heating provides a transparent synthetic silica glass, which, as shown in the attached sheet regarding the transformation of silica, is different and distinct from silica prepared by heating at 800°C or less.

Finally, Snyder relates to a metal mold, not a mold for producing a silicon ingot. See, for example, column 1, line 13; column 2, lines 59-60; and column 3 line 32. Moreover, the coating of silica mentioned at column 6, etc., is silica glass which clearly is different from the presently claimed stucco layer heated at not more than 800°C. In addition, Snyder relates to a mold made of a metal body, not one having a graphite or quartz mold body, and there is nothing in the reference to suggest that the coating layer provided in Snyder on a metal base could or should be used with any other type of base. These several distinctions clearly show that Snyder is not suggestive of the present invention and to the extent that the rejection relies on official notice of facts essential to a *prima facie* case those facts are hereby seasonably challenged.

Accordingly, and in view of the discussion held at the interview and the above amendment and remarks, Applicants submit that the present application is in condition for allowance. In compliance with the Examiner's comment regarding Figure 9, Applicants have amended the Figure to indicate therein the description of "conventional art." Applicants have not labeled this figure "Prior Art" because the specification does not discuss whether the conventional quartz mold described was available under a section of the patent laws that would qualify this art as legally available "Prior Art" in the United States.

Respectfully submitted,

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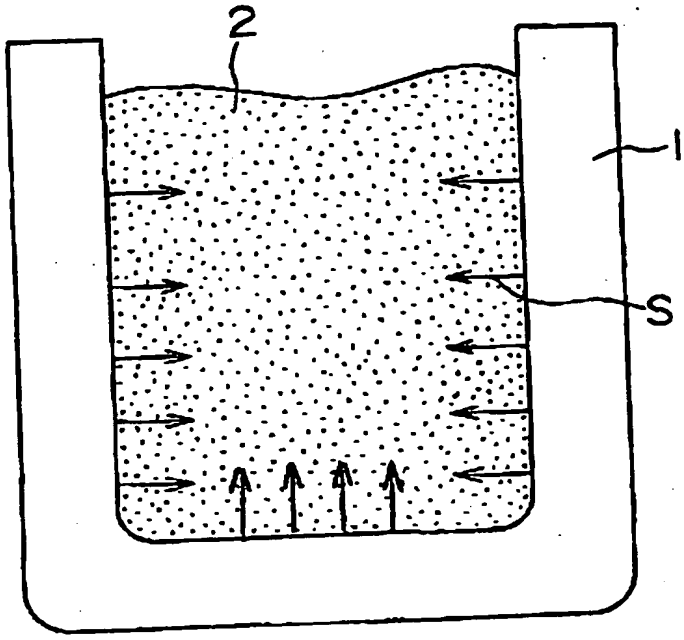
The transformation of silica

As same quality many images (transformation) of main silica, the crystallized type and stable domain of 「α-quartz → β-quartz→ toridymite (high temperature type) → cristobarite (high temperature type) → silica glass」 were shown in Table 1 sequentially from the stable thing at low temperature. It calls it "transition" to change under temperature conditions with two or more crystal structures which have a multi-image relation. The transition temperature of the silica under atmospheric pressure is α-quartz[573℃], β-quartz[867℃], toridymite (high temperature type)[1470℃], cristobarite (high temperature type) [1470℃], silica glass[1713℃].

Table 1

The transformation of silica	Crystal system	Specific gravity	Stable domain (◎: Stable, ○: Semi- stability, ◇: Instability)																					
			Normal					573℃			867℃					1470℃					1713℃				
α-quartz	Three directions (the shape of six square pillars)	2.65	◎	◎	◎	◎	◎	◎																	
β-quartz	Six directions(the shape of a both six-sided pyramid)	2.5							◎	◎	◎	○	○	◇	◇	◇	◇								
β 2-toridymite	Six directions(the shape of a thin six-sided pyramid)	2.2						○	○	○	○	◎	◎	◎	◎	◎	○	○	◇						
β-Cristobalite	Cube・An equal axis (Spherical)	2.2				○	○	○	○	○	○	○	○	○	○	○	○	◎	◎	◎					
Silica glass	(Amorphous)	2.2	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	◎	◎	



CONUENTIAL ART

Fig. 9